

Serial No.: 09/848,778

Attorney's Docket No.: 06666-077001 / USC-3027

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-19 and 36-102 are pending with claims 1, 36, 54, 61, 78, 85, 91, 93, 95, 97, 99, and 101 being independent. No new matter has been added.

Summary of Interview

In an interview on August 8, 2005 and follow-up interview on September 2, 2005, the independent claims were discussed with reference to the objection of the specification and rejections of the claims under 35 U.S.C. 112, 102, and 103. The examiner agreed that amending page 21, line 18 of the specification such that "can be" would be changed to "is", would overcome the objection of the specification and the rejections under 35 U.S.C. 112. Regarding the remaining rejections, no formal agreement was reached. However, it was discussed that the claimed subject matter was different from the prior art of record and that, to alleviate concerns of the examiner, a further description of "parallel prefix and suffix operations," would be provided.

Rejections under 35 U.S.C. 112

Claims 1-19, 36-90, 92, 94, 96, 98, 100 and 102 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the enablement requirement; and 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These rejections are traversed.

In view of the office action mailed April 19, 2005, the interview, and amendments to the specification, which are in

Serial No.: 09/848,778

Attorney's Docket No.: 06666-077001 / USC-3027

accordance with remarks in the office action and the agreement made during the interview, these rejections should be withdrawn.

Rejections under 35 U.S.C. 102 and 103

Claims 1-19 and 36-102 are rejected under one or more of 35 U.S.C. 102(e) and 103(a) in view of a combination of Viterbi et al. (U.S. Pat. No. 5,933,462; hereafter "Viterbi") and Benedetto et al. (S. Benedetto, D. Divsalar, G. Montorsi, and F. Pollara, Soft-Output Decoding Algorithms in Iterative Decoding of Turbo Codes, TD.A progress Report 42-1 24, Feb. 15, 1996; hereafter "Benedetto") as allegedly being anticipated and/or allegedly being unpatentable. These rejections are traversed.

At a minimum, sections 102 and 103 require that the prior art reference (or references when combined) must teach or suggest all the claim limitations. This criteria has not been met.

Independent claims 1, 36, 54, 61, 78, 85, 91, 93, 95, 97, 99, and 101 include language directed toward using a tree structure arranged to perform parallel prefix and/or suffix operations to compute forward state metrics, backward state metrics, and/or a soft-inverse of a finite state machine. Consider the exemplary language of claim 1:

"at least one SISO module using a tree structure arranged to perform parallel prefix and suffix operations to compute forward and backward state metrics (emphasis added)."

Viterbi discloses performing forward and backward Viterbi decoding at each node within a window moved over a trellis (Abstract). Benedetto discloses soft-output decoding algorithms in iterative decoding of turbo codes (Title). However, neither of these cited references teach or suggest using a tree structure arranged to perform parallel prefix and/or suffix

Serial No.: 09/848,778

Attorney's Docket No.: 06666-077001 / USC-3027

operations to compute forward state metrics and/or backward state metrics, respectively, and/or a soft-inverse of a finite state machine. This was discussed during the interview on August 8, 2005 and provisionally agreed upon (i.e., the examiner agreed that this did not appear to be in the disclosures but did not wish to have a formal agreement at that time). Because none of the cited references disclose the subject matter of the independent claims, the rejections of these claims under 35 U.S.C. sections 102 and 103 should be withdrawn.

Claims 2-19, 37-53, 55-60, 62-77, 79-84, 86-90, 92, 94, 96, 98, 100, and 102 depend, directly or indirectly, from claims 1, 36, 54, 61, 78, 85, 91, 93, 95, 97, 99, and 101. Accordingly, applicant submits these claims are allowable for the reasons given above.

#### Amendment to the Specification

Solely to expedite examination of the application and without conceding the propriety of the examiner's request for changes to the specification, the specification has been amended. No new matter has been added. As discussed above, the examiner has requested a description of "parallel prefix and suffix operations." The amended specification provides a description of these operations by describing parallel prefix and suffix structures, and by describing the relationship of these operations to parallel prefix and suffix structures (see e.g., last paragraph of the amendment).

#### Conclusion

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully requested.

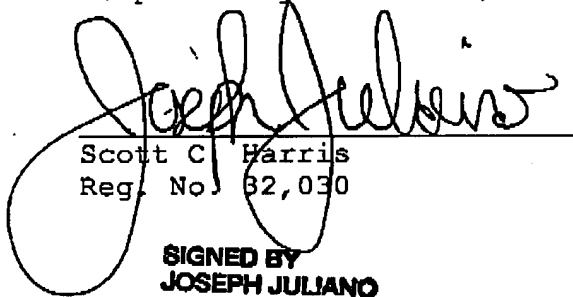
Serial No.: 09/848,778

Attorney's Docket No.: 06666-077001 / USC-3027

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 9/3/2005  
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